

Amendments to the Specification:

Please add the following new paragraph after the title of the invention and above Field of the Invention:

[000] This application claims the benefit of U.S. Provisional Application No. 60/413,162, filed September 25, 2002.

Please replace paragraph [0046] with the following replacement paragraph:

[0046] Individual rods of the plurality of rods 80 are categorized into two different types of rods 82 and 84, which are identified conveniently by the electric voltages applied to them using a not illustrated electrical controller. Rods 82, shown as crosshatched circles in Figure 5, have electrical connectors through which an asymmetric waveform voltage is applied. The remaining rods 84 are shown as open circles in Figure 5. A dc voltage is applied to either or both of rods 82 and rods 84 so that a dc potential difference, identically referred to as the compensation voltage, exists between the two types of rods. Each type of rod corresponds to one of the first or second electrode of a FAIMS analyzer. Furthermore, the rods 82, the rods 84, the ion inlet plate 72 and the ion outlet plate 76 have electrical connectors through which a dc voltage is applied. Alternately the electrical connectors may be used to set any of rods 82 22, rods 84 24, the ion inlet plate 72 42 and the ion outlet plate 76 46 at ground potential. The dc voltages applied to each one of the rods 84, the ion inlet plate 72 and the ion outlet plate 76 are not necessarily identical, since the ion inlet plate 72 preferably is biased to “push” ions in a direction toward the plurality of rods 80, whilst the ion outlet plate 76 preferably is biased to “pull” ions away from the plurality of rods 80 and in a direction toward the ion outlet 78. Of course, many other possible combinations of applying the dc voltages and the asymmetric waveform voltage to the individual rods of the FAIMS analyzer 70 will be apparent to one of skill in the art. It should be understood that the above example is intended to serve as a specific and non-limiting example to facilitate a more complete understanding of the instant invention.

Please replace paragraph [0047] with the following replacement paragraph:

[0047] Referring now to Figure 1 and Figure 5, it is clear that the placement of the rods is not important to the overall motion of the ions through a FAIMS analyzer according to the instant invention. Rather, it is the fact that the array of rods is symmetrical around each rod 22, 82 to which the asymmetric waveform voltage is applied. When such a condition is satisfied, the ions may travel in any direction that the gas is flowing and experience approximately identical conditions. This is illustrated by a comparison of Figure 1 and Figure 5. In particular, the rods in Figure 5 are arranged in a second optional pattern, different from the cubic array shown in Figure 1 by rotation of the symmetric pattern of rods by about 45 degrees. Of course, other angles ~~angles~~ of rotation are also envisaged.

Please replace paragraph [0053] with the following replacement paragraph:

[0053] Referring now to Figure 7, shown is a simplified exploded view of yet another FAIMS analyzer including an array of rod-shaped electrodes according to the instant invention, including two sets of electrode rods. In particular, a plurality of rods 110 is mounted to a same plate 112, which includes an electrical contact for connection, during use, to an electrical controller capable of applying an asymmetric waveform voltage to the same plate 112. Optionally, a CV is applied to the same plate 112 via an electrical contact. Similarly, a second plurality of rods 114 is mounted to a different plate 116, which includes an electrical contact for connection, during use, to an electrical controller capable of applying at least a dc voltage to the different plate 116. Advantageously, only a single electrical contact is require to apply the asymmetric waveform voltage to each rod of the plurality of rods 110 via the same plate 112. Similarly, only a single electrical contact is required to apply the dc voltage to each rod of the plurality of rods 114 via the different ~~same~~ plate 116. Optionally, each rod of the plurality of rods 110 and each rod of the second plurality of rods 114 protrudes through an electrically insulating material 118, which supports the rods and maintains a desired spacing between the rods. Furthermore, the electrically insulating material insulates rods of the first plurality of rods 110 from the different plate 116, and insulates rods of the second plurality of rods 114

from the same plate 112. Optionally, a free end of each rod terminates at an electrically insulating endcap member.